XI. A NEW SUBSPECIES OF THE ARIZONA GRAY SQUIRREL (*SCIURUS ARIZONENSIS* COUES).

By J. Kenneth Doutt.

Recent study of a collection of mammals made for the Carnegie Museum in Arizona in the year 1927, reveals that the Gray Squirrels inhabiting the Santa Catalina and Santa Rita Mountains represent a race, which I here name and describe.

Sciurus arizonensis catalinæ, subsp. nov.

Type. Adult female (skin and skull) No. 5612, Carnegie Museum Catalog of Mammals. Taken near Soldier Camp, altitude 8000 feet, Santa Catalina Mountains, Pima County, Arizona, August 30, 1927. Collected by J. Kenneth Doutt (original No. 130).

Diagnosis. Anterior half of upper parts pale mouse-gray; posterior half of upper parts, russet. (Color terminology according to Ridgway, 1912). Rostrum narrow; interorbital breadth great; brain-case shallow (See measurements)

Range. At present only known from the Santa Catalina and Santa Rita Mountains of southern Arizona.

Material. Five specimens from the type-locality; one specimen from Old Baldie Peak, 9400 feet, Santa Rita Mountains, Santa Cruz County, Arizona; all taken between July 14th and August 30, 1927.

For comparison eleven specimens from the California Museum of Vertebrate Zoology as follows: four specimens from the type-locality of *Sciurus arizonensis huachuca* taken during May, June, and July; seven specimens of *Sciurus arizonensis arizonensis* from Carr's Ranch, Sierra Ancha, Gila County, Arizona, taken in June and November.

Comparisons. This new race comes from a region, which lies between the range of *S. a. arizonensis*, which occurs northward, and that of *S. a. huachuca*, which occurs southward; and, as might be expected, it shows characters which are intermediate between the two subspecies. The intermediate character of specimens from this region was noted by Mearns (1907, p. 280) and by Nelson (1899, p. 97). As compared with *huachuca*, *catalinæ* is russet instead of deep

mouse-gray over the rump; rostrum relatively, as well as actually, narrower and shallower; interorbital breadth greater; height of brain-case less. As compared with *arizonensis*, *catalinæ* has the brown markings confined to the rump, and not extending continuously from the head to the base of the tail; rump russet, rather than tawny olive; interorbital breadth tending to be greater, and height of brain-case less.

Measurements. In the following table the measurements of the three subspecies of *Sciurus arizonensis* are in millimeters. In each case the average is followed by the maximum and minimum in parenthesis.

TABLE OF MEASUREMENTS

Species and Subspecies	Number of specimens	Width of rostrum over anterior palatine foramina.	Least intercostal breadth	Height of brain-case at bullæ*
S. a. arizonensis	7	10.7 (11.2-10.4)	21.0 (22.0-20.0)	20.5 (21.0-19.8)
S. a. catalinæ	6	10.9 (11.3-10.5)	21.8 (22.8-20.7)	19.7 (20.0-19.5)
S. a huachuca	4	11.9 (12.4-11.2)	20.6 (21.0-19.6)	20.3 (20.5-20.2)

Remarks. The series of *S. a. arizonensis* clearly shows that there is a decided seasonal variation in color, similar to that mentioned by Mearns (1907, p. 279) in the case of *S. a. huachuca*; similar variation may be also expected in *S. a. catalinæ*.

The specimen from the Santa Rita Mountains, although most similar to *S. a. catalinæ*, can be separated readily from any of the other five specimens by its more rufous crown patch. In the series of seventeen skins of the species here assembled, it is interesting to note that specimens to the south are grayest, and that northward there is a gradual increase of rufous or tawny olive.

At the time the author was in the Santa Catalina Mountains these squirrels were feeding on the seeds of the White Pine cones, and in this connection the following digest from the field journal may be of interest. On the morning of August 24, I was hunting along the ridge south of Soldier Camp, and having previously seen signs of squirrels working along the ridge, was on the lookout for them. About five hundred yards from camp I shot one out of a White Pine tree, and just a little later saw two others in another White Pine tree. I watched one of these go out to the end of the branch and gnaw off a cone.

*Measurement taken from lowest point of auditory bullæ to lowest point in interparietal, that is, to the depression just anterior to the slight lambdoidal ridge.

Instead of letting the cone fall to the ground and going there to eat it, he carried it part way back along the branch and there, balancing himself on his hind feet, he held the cone between his front feet and the branch. As he ate the seeds he turned the cone around on the branch with much dexterity. The cones at this time were covered with soft resin and the squirrels became smeared with this, especially on the paws and about the mouth, thus causing the fur there to become badly matted.

Carnegie Museum,
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Please paste into Vol. XX, on p.273.

LITERATURE CITED

MEARNS, E. A.
1907 Mammals of the Mexican Boundary of the United States. U. S. Nat. Mus., Bull. 56, pt. 1.

NELSON, E. W.
1899 Revision of the Squirrels of Mexico and Central America. Proc. Wash. Acad. Sci., 1, pp. 15-110.

RIDGWAY, R.
1912 Color Standards and Color-nomenclature.

ADDENDA ET CORRIGENDA

ANNALS OF THE CARNEGIE MUSEUM VOL. XX, No. 11, 1931

p. 272. fifth line from top, *after* "rump russet, rather than tawny olive" *insert* 'shoulders pale mouse-gray rather than tawny olive.'

p. 272. In the table of measurements column four *change* "intercostal breadth" to read 'interorbital breadth.'